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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,849	06/08/2005	Hannu Ensio Jokinen	DN02-033	8519
7590	06/11/2007			
Michael J Herman Minerals Technologies Inc One Highland Avenue Bethlehem, PA 18017			EXAMINER NGUYEN, SANG H	
			ART UNIT 2886	PAPER NUMBER
			MAIL DATE 06/11/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/537,849	JOKINEN, HANNU ENSIO	
<b>Examiner</b>	<b>Art Unit</b>		
Sang Nguyen	2886		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 08 June 2005.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-6 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1-6 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892) 4)  Interview Summary (PTO-413)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. \_\_\_\_ .  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date . 5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_\_

**DETAILED ACTION**

***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

**Drawings**

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "the position of the center and at least two linear edges thereof" in claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

**Regarding claim 1;** the phrase "deflecting and optical radiation beam" is unclear. What does applicant mean "deflecting and optical radiation beam"? For examination purposes, this phrase in the step (a) would become "deflecting and the optical radiation beam".

**Regarding claim 1;** the phrase "determining the position of the center and at least two linear edges thereof and creating a first temporary coordinate system based on the position of the center and direction of the at least two edges thereof" is unclear. What or How does applicant mean "determining the position of the center and at least two linear edges thereof and creating a first temporary coordinate system based on the position of the center and direction of the at least two edges thereof"? The applicant should clarify the phrase in the light of the original disclosure.

**Regarding claim 1** recites the limitation "the position of the center" in lines 9-11. There is insufficient antecedent basis for this limitation in the claim.

**Regarding claim 4;** the phrase "the center of the fixing marks is calculated from the intersections thereof" is unclear. What does applicant mean the phrase "the center of the fixing marks is calculated from the intersections thereof"? The applicant should clarify the phrase in the light of the original disclosure.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

The claims are directed to a judicial exception; as such, pursuant to the Interim Guidelines on Patent Eligible Subject Matter (MPEP 2106), the claims must have either physical transformation and/or a useful, concrete and tangible result. The claims fail to include transformation from one physical state to another. Although, the claims appear

useful and concrete, there does not appear to be a tangible result claimed. Merely <the position of the fixing marks are determined by: (a) deflecting and optical radiation beam across a first fixing mark in first and second intersecting directions and determining the position of the center and least two linear edges thereof and creating a first temporary coordinate system based on the position of the center and the directions of the at least two edges thereof, (b) searching, based on the first temporary coordinate system, at least two further fixing marks and determining the position of the centers thereof, (c) defining, based on the center positions of said fixing marks the coordinate system of the container> would not appear to be sufficient to constitute a tangible result, since the outcome of the <the position of the fixing marks are determined by: (a) deflecting and optical radiation beam across a first fixing mark in first and second intersecting directions and determining the position of the center and least two linear edges thereof and creating a first temporary coordinate system based on the position of the center and the directions of the at least two edges thereof, (b) searching, based on the first temporary coordinate system, at least two further fixing marks and determining the position of the centers thereof, (c) defining, based on the center positions of said fixing marks the coordinate system of the container> step has not been used in a disclosed practical application nor made available in such a manner that its usefulness in a disclosed practical application can be realized. As such, the subject matter of the claims is not patent eligible.

The claim is drawn to a judicial exception (abstract idea). For an abstract idea to be patentable, it needs to directed to a practical application or have useful, concrete and

tangible result. The position of the fixing marks are determined step, while useful and concrete, does not appear tangible; i.e., merely determining/calculating does not appear sufficient to constitute a practical result since it's not being used in a practical application nor made available in such a manner that its usefulness in the disclosed practical application can be realized. As such, the claim is nonstatutory under 101.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

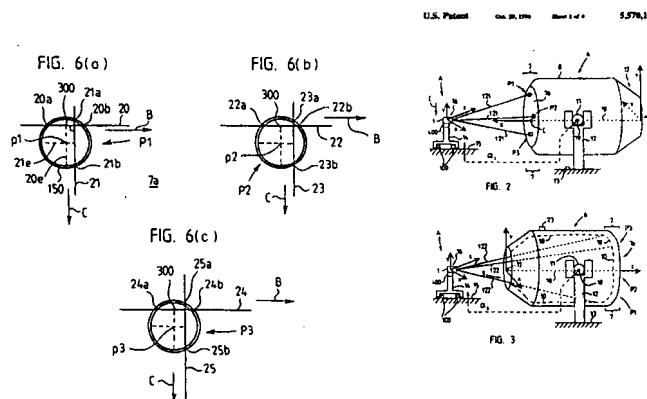
**Claims 1 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Jokinen et al (U.S. Patent No. 5,570,180).**

**Regarding claim 1;** Jokinen et al discloses a method for position a measuring device which emits and receives optical radiation to measure wear in the lining of a container (6 of figure 2), said method involving fixing coordinate systems (16, 17 of figure 2) for the measuring device (1 of figure 2) and the container (6 of figure 6) by combining that coordinate systems (16, 17 of figure 2), and individually determining the positions of a plurality of specific fixing marks (e.g., specific fixing points [P1, P2, P3 of figure 2]) in the coordinate system (16 of figure 1) of the measuring device (1 of figure 1), wherein each of said fixing marks (e.g., specific fixing points [P1, P2, P3 of figure 2]) is substantially regular in shape, wherein the position of the fixing marks are determined by (claim 1):

(a) deflecting an optical radiation beam across a first fixing mark (e.g., a first fixing point [P1 of figures 2-3]) in first and second intersecting directions (B, C of figure 6a and claim 1) and determining the position of the center (p1 of figure 6a) of the first fixing mark (P1 of figure 6a) and least two linear edges (20, 21 of figure 6a) of the first fixing mark (P1 of figure 6a) by a distance measurement electronic (2 of figure 1) and creating a first temporary coordinate system based on the position of the center and the directions of the at least two edges of the first fixing mark (col.5 line 9 to col.6 line 25),

(b) searching, based on the first temporary coordinate system, at least two further fixing marks (P2, P3 of figures 6b-6c) and determining the position of the centers thereof (col.5 line 9 to col.6 line 25),

(c) defining, based on the center positions (p1, p2, p3 of figures 6a-6c) of said fixing marks (P1, P2, P3 of figure 6a-6c) in the coordinate system of the container (17 of figures 2-3). See figures 1-8



**Regarding claim 4;** Jokinen et al discloses the center of the fixing marks (P1, P2, P3 of figures 6a-6c) is calculated from the intersections thereof (claim 4).

**Regarding claim 5;** Jokinen et al discloses the intersections are detected by

one of distance measuring and reflection intensity measuring (claim 5).

**Regarding claim 6;** Jokinen et al discloses the fixing marks (P1, P2, P3 of figures 6a-6c) comprise a retro-reflective surface (claim 6).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jokinen et al (U.S. Patent No. 5,570,185).**

**Regarding claim 2;** Jokinen et al discloses the first fixing mark (P1 of figure 6a) is substantially regular shape is a circular and/or annular (col.4 lines 64-67). However, Jokinen et al discloses all of features of claimed invention except for the first fixing mark is a rectangular in shape. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate method of measuring position device of Jokinen et al with the first fixing mark is a rectangular in shape, since it has

been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. *In re Venner*, 120 USPQ 192.

**Regarding claim 3;** Jokinen et al discloses the first fixing mark (P1 of figure 6a) is equal to the at least two further fixing marks (P2, P3 of figure 6b-6c). However, Jokinen et al discloses all of features of claimed invention except for the first fixing mark larger in size than the at least two further fixing marks. It would have been an obvious matter of design choice to combine method of measuring position device of Jokinen et al with the first fixing mark is larger in size than the at least two further fixing marks, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Harvill et al (6922252) discloses automated positioning method for contouring measurements; Kirchhoff et al (6922251) discloses measurement of the wear of the fireproof lining of a metallurgical vessel; Jokinen (5706090) discloses method for positioning a container for measuring wear in the container lining, Jokinen (5546176) discloses method for measuring wear in the lining of a container; or Kirchhoff et al (WO 03/100336) discloses a method for repairing a protective lining of an industrial reaction or transport vessel.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Nguyen whose telephone number is (571) 272-2425. The examiner can normally be reached on 9:30 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifu Chowdhury can be reached on (571) 272-2800 ext. 86. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

June 6, 2007

*SN*

  
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Art Unit 2886